

Missouri Department of Natural Resources Total Maximum Daily Load Information Sheet

Hamilton Lake

Waterbody Segment at a Glance:

County: Caldwell
Nearby Cities: Hamilton
Area of impairment: 80 acres
Pollutant: Cyanazine
Source: Corn and Sorghum Production

This lake is proposed for deletion on the 2002 303(d) list.

TMDL Priority Ranking: Medium



State map showing location of watershed

Description of the Problem

Beneficial uses of Hamilton Lake:

- Livestock and Wildlife Watering
- Protection of Warm Water Aquatic Life and Human Health associated with Fish Consumption
- Boating and Canoeing
- Drinking Water Supply

Use that is impaired

- Drinking Water Supply

Standards that apply

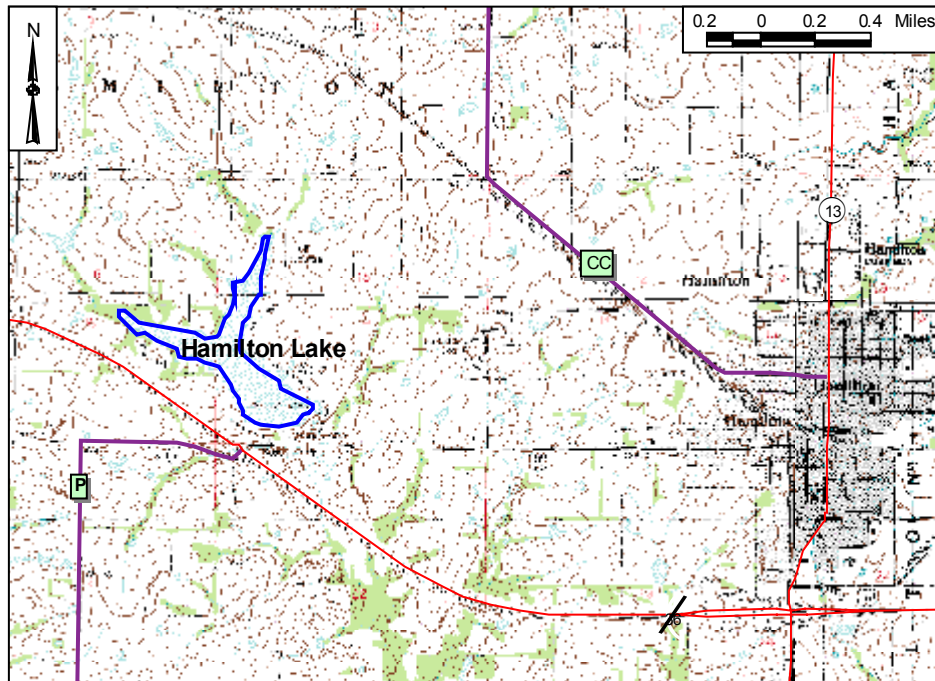
- The impairment of this lake is based on exceedence of the federal standard of 1 microgram per liter ($\mu\text{g/L}$) cyanazine.

Cyanazine is an agricultural herbicide that was used from 1971 to 1999, when its manufacturer voluntarily withdrew it from production. At one time it was the fourth most widely used synthetic chemical pesticide in U.S. agriculture, applied to corn, cotton, and sorghum crops to control broadleaf weeds. It is relatively persistent in the environment, and under certain conditions will remain at significant levels in surface water for over one year. It has been identified as a surface water contaminant in 30 states, including Missouri. Cyanazine was withdrawn from use after being linked to a range of adverse health effects, including respiratory distress, cerebral palsy and impaired fetal development.

Cyanazine data for this water body are limited to finished drinking water. In 1994, Cyanazine concentrations were found to be much higher than the 1 $\mu\text{g/L}$ (or parts per billion) federally

recommended limit. Since that time, all cyanazine levels in finished drinking water were less than 1 µg/L. The current long-term average is 0.53 µg/L, so this lake is recommended for deletion on the 2002 303(d) list. The Department of Natural Resources is presently sampling raw lake water for cyanazine to see if it exceeds the federal action level used in Missouri as a standard for raw water.

Map of Hamilton Lake, Caldwell County



Average Annual Cyanazine Concentrations in Finished Drinking Water from Hamilton Lake (µg/L)

Year	Average	Range
1994	4.03	0-9.9
1995	0.49	0-0.99
1996	0.18	0-0.72
1997	0	0-0
1998	0	0-0
1999	0	0-0
2000	0	0-0

Source: Missouri Department of Natural Resources

For more information call or write:

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